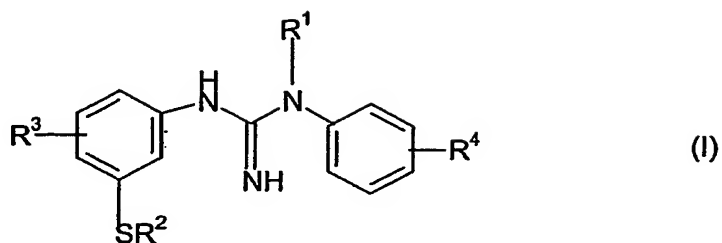


Claims

1. A compound of formula (I):

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or a salt or solvate thereof, wherein:

R^1 is $-^{11}\text{CH}_2\text{R}^5$ or $[^{18}\text{F}]\text{-C}_{1-4}$ fluoroalkyl wherein R^5 is hydrogen or C_{1-4} alkyl;

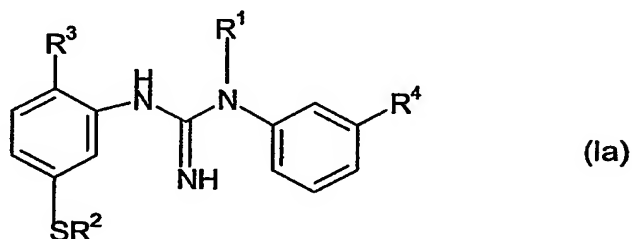
R^2 is hydrogen or C_{1-4} alkyl;

10 R^3 is halo; and

R^4 is halo, C_{1-4} alkylthio, or C_{1-4} alkyl.

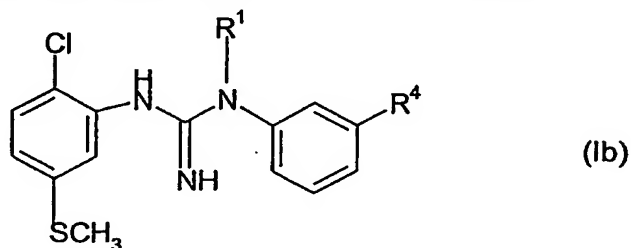
2. A compound according to claim 1 of formula (Ia) :

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or a salt or solvate thereof, wherein R^1 , R^2 , R^3 , and R^4 are as defined in claim 1.

3. A compound according to claim 1 or 2 of formula (Ib):



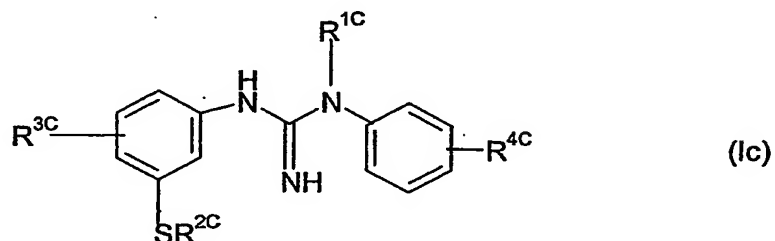
or a salt or solvate thereof, wherein:

R^4 is C_{1-4} alkylthio;

R^1 is either $-^{11}\text{CH}_3$, $-^{11}\text{CH}_2\text{CH}_3$, or $-^{11}\text{CH}_2\text{CH}_2\text{CH}_3$ or R^1 is $-\text{CH}_2^{18}\text{F}$, $-\text{CH}_2\text{CH}_2^{18}\text{F}$, or $-\text{CH}_2\text{CH}_2\text{CH}_2^{18}\text{F}$.

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4. A compound of formula (Ic):



or a salt or solvate thereof, wherein:

10 R^{1c} is C_{1-4} alkyl or C_{1-4} haloalkyl;

R^{2c} is hydrogen or C_{1-4} alkyl;

R^{3c} is radioiodine (suitably ^{123}I , ^{124}I , ^{125}I , or ^{131}I); and

R^{4c} is halo, C_{1-4} alkylthio, or C_{1-4} alkyl.

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5. A compound according to any one of claims 1 to 3 selected from:

(N-(2-chloro-5-(methylthio)phenyl)-N'-(3-methylthio)phenyl)-N'-[N-methyl- ^{11}C]-methylguanidine; and

(N-(2-chloro-5-(methylthio)phenyl)-N'-(3-methylthio)phenyl)-N'-[^{18}F]-

20 fluoromethylguanidine;

or a salt or solvate thereof.

6. A compound according to any one of claims 1 to 5 for use in an *in vivo* diagnostic or imaging method such as PET.

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7. Use of a compound according to any one of claims 1 to 5 in the manufacture of a radiopharmaceutical for the *in vivo* diagnosis or imaging of an NMDA-mediated disease.

8. A method for the *in vivo* diagnosis or imaging of NMDA- mediated disease in a subject, preferably a human, comprising administration of a compound according to any one of claims 1 to 5.

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